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ABSTRACT

Based on the actions of the child as a learner from infancy on, this paper is a working copy intended for inclusion in a forthcoming curriculum manual, to be published in 1972. Detailed lists include: 1. Action and Learning Throughout Life; 2. Action in the Preschool Classroom; and 3. Questions and Answers About Action. It concludes with a question and listing on, "How can the following be used for action experiences?" (For related documents, see PS 006 089, and 091-094.) (RG)

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ACTION

In the Cognitive Preschool Model

PS 006088

High/Scope Educational Research Foundation
Preschool Department

Ypsilanti • Michigan

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THIS IS A WORKING COPY: It is being revised for inclusion in a curriculum manual we hope to publish in 1972.

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HIGH/SCOPE EDUCATIONAL RESEARCH FOUNDATION
PRESCHOOL DEPARTMENT

ACTION IN THE COGNITIVE PRESCHOOL CURRICULUM

Action is a key word in the Cognitive Curriculum. As we use the term, it refers to what the child, the learner, does, not what he says or reads or writes and not what his teacher says or does.

This does not mean that the child in our preschool only acts and does not think! Action is the basis for thinking; a child's intelligence grows as a consequence of his actions upon the things in his world. This is also true for adults: we learn best through concrete experiences.

Action and Learning in Infancy

Almost all of what a baby learns is based on his own actions. He first learns to coordinate his senses and his movements so that he can reach for interesting things, bring them closer to look at, taste, smell and feel. He learns how to produce interesting effects, such as making a toy squeak, a bell ring or a spoon drop. He learns to suck at a bottle, shake a rattle, crumple up paper. As he develops his separate actions into coordinated movements, he learns that he exists in a world of objects which continue to be present whether or not he can see them. He learns how the objects around him are located in space; some things are close and some far away. When he begins to walk he learns to find his way around in that space, to get from one point to another in a number of ways or to retrace his steps and end up where he started.

The infant's elementary understanding of space and time, of cause and effect, of difference and similarity is achieved through action and without language, and is the basis for the development of logical reasoning.

Action and Learning Throughout Life

Learning through action does not stop in infancy. Consider these examples

a. A teenager learning to drive a car discovers how to let up on the clutch pedal slowly enough not to stall the motor.

b. A second grader discovers that he can play notes individually on the piano.

c. A six-year-old child learns to take the same number of knives, forks, and spoons when setting the table.

d. A high school student discovers that he must move a slide under the microscope to the left if he wants the specimen to appear to move to the right.

e. A Little Leaguer learns to judge where a fly ball will fall.

f. A Boy Scout learns from experience how to stack wood for a fire.

g. A chemist discovers the effects of rapidly cooling a new material.

h. An artist tries out a new technique to see whether it produces the desired results.

i. A sportsman learns how to shoot accurately by practicing with a target.

j. An aeronautical engineer tests a new airplane wing design in a wind tunnel.

k. A housewife learns how much salt to put into her stew by observing her family's reaction.

Action in the Preschool Classroom

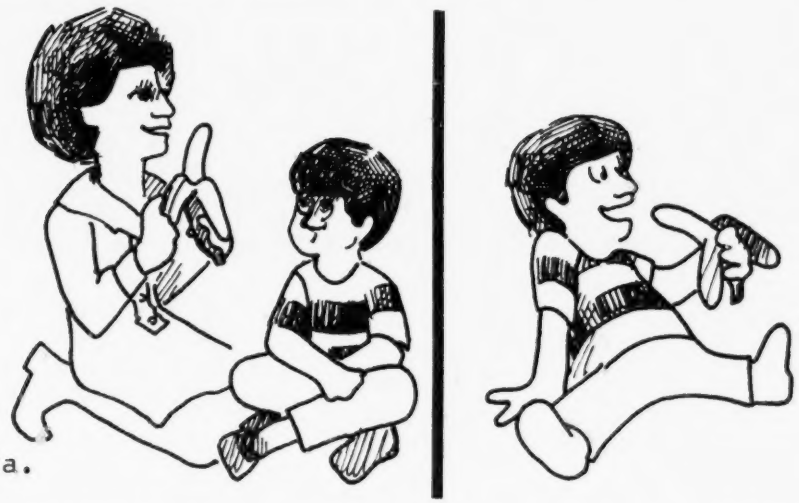
Actions provide the child with his basic learning experiences. In the classroom and on field trips, the environment is actively explored. Activities which are only talking or looking are introduced only after the child has had ample opportunity for active learning.

In action or "motoric" learning, the learner finds out about things and how they are related by doing something. In non-action learning, the learner listens to explanations, watches someone do something, or answers questions verbally. Notice we didn't say that all good learning situations are or should be "action" experiences. What we are saying is that actions provide the core of concrete experiences, the core of understanding, upon which the ability to learn by looking, listening, and talking as well as by reading and writing, is founded.

Which item in each of the following pairs most clearly illustrates <u>action</u> in the learning experience?

1a. A preschooler learns how to cut with scissors by practicing on scrap paper.

1b. A preschooler learns about scissors by watching the teacher cut paper.



2a. 2b.

2a. A preschooler learns about bananas by watching the teacher peel one and cut it up.

2b. A preschooler learns about bananas by peeling one, trying to mash it and cut it, and eating it.

3a. A preschooler learns to put the wooden shapes into the correct slots in a shape sorter.

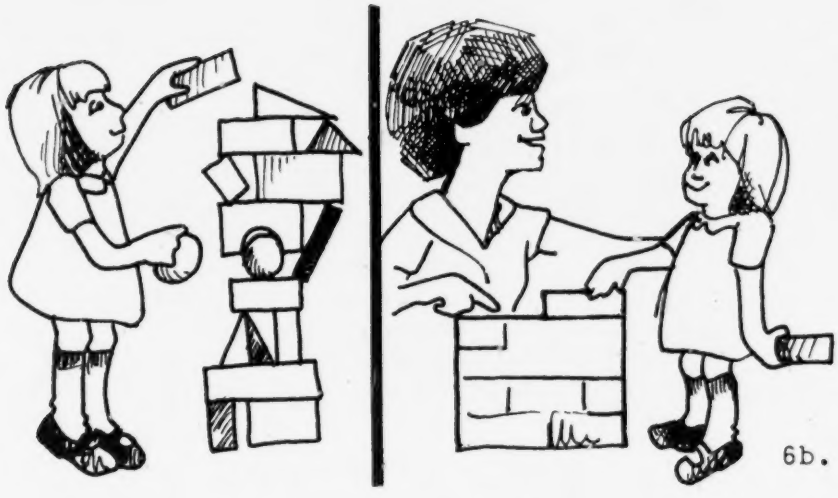
3b. A preschooler learns to say "square" when the teacher holds up a wooden square.

4a. A three-year-old discovers how to put his coat on by repeatedly trying.

4b. A three-year-old is completely dressed by the teacher in preparation for outdoor play, because it saves time.

5a. A Head Start child learns to say the numbers from one to ten by repeating what the teacher says.

5b. A Head Start child matches the number of napkins to the number of cups in setting the table for lunch.



6a. 6b.

6a. A kindergarten child learns to build a tall tower that won't topple by using blocks in several different ways.

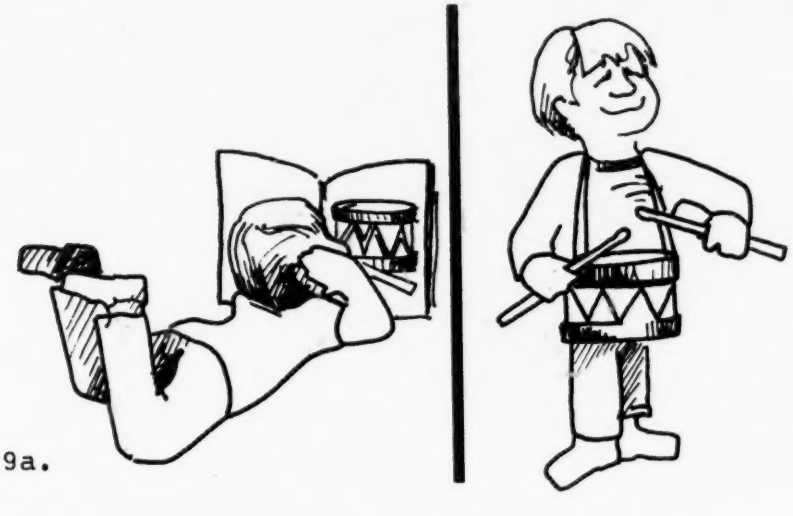
6b. A kindergarten child builds a tower exactly as the teacher tells him to.

7a. A four-year-old learns how to open the paste jar by trial-and-error.

7b. A four-year-old watches an older child open a paste jar.

8a. A child learns to say that wood comes from trees.

8b. A child helps to cut up a log, sand the rough wood, etc.



9a.

9a. A child learns to identify pictures of musical instruments.

9b. A child experiments with the sounds made by a real drum, triangle, and piano.

10a. A preschool child finds out that a block will balance a toy truck in a pan balance.

10b. A preschool child listens to the teacher tell the class the weight in pounds of a number of objects she has weighed on a scale in front of the class.

11a. A child makes a plaster handprint.

11b. A child is asked to guess which animal made a certain track in the snow. The animal is no longer present.

12a. A child is asked to identify a picture of an eggbeater.

12b. A child is asked to pantomime the use of an eggbeater after having first used an eggbeater.

13a. A child discovers for himself that the hamster will get out of his cage unless the door is locked.

13b. Children discuss with the teacher why animals at the zoo are kept in cages.

14a. A child pastes pre-cut circles on a sheet of paper and learns to call them "circles," and say they are "round."

14b. A child tries to roll a ball, a paper cup, a toy truck, a milk carton, and a fork.

15a. A child discovers that four teacups of water will fill a bowl.

15b. A child learns to identify the numeral "4" when the teacher writes it on the blackboard.

16a. A child learns to put a come-apart toy together.

16b. A child identifies the parts of a car in a picture.

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17a. A child discovers what happens when he mixes blue and yellow finger paint.

17b. A child is told to color the grass green in a coloring book picture.

Questions and Answers about Action

Q. Should all experiences involve some physical action on the part of the children?

A. Most activities can and should have an action component. Listening to a story, for example, can be supplemented by having the children pretend in pantomime to be the characters in the story. Activities which are purely symbolic (e.g., looking at pictures) or purely verbal are in general to be done only after active learning experience with the relevant materials and concepts.

Q. Is drawing and other symbolic representation "action learning?"

A. "Action" as the term is used here means that the learner is gaining knowledge from the act of doing something. If the process of making a picture or model is one in which the learner is actively trying to represent something or is learning about the object he is depicting, this would be an active learning experience. If the child is mechanically following directions ("First we paste the head on the paper like this..."), the experience loses the benefit of having the learner actively involved. The teacher can be particularly helpful by calling attention to the properties and structure of the real object, rather than by criticizing the representation the child is trying to make.

Q. Isn't learning to write "action learning?"

A. Learning to write does not <u>directly</u> help the child to learn about relationships or to think logically. It is not an "action" experience for a preschool child.

Q. What kinds of actions are especially to be encouraged in the cognitive preschool or kindergarten class?

A. Exploring with all senses.

Investigating the properties of objects, materials and living things.

Moving one's whole body in various ways (such as jumping, climbing, running).

Learning what one's hands can do and discovering the uses of tools and art media.

Taking things apart and putting them together.

Changing and acting upon objects and substances.

Imitating the actions of people, animals, and objects.

Combining, separating, arranging, and rearranging.

Sorting and comparing.

Grouping similar things together.

Ordering objects in space and experiencing of events in time.

Ordering things according to some qualitative dimension (e.g., smoothness) or by quantity.

Carrying out a self-made plan.

How can the following be used
for action experiences?

Rubber bands
Sponges
Pencils
Balls - tennis, rubber, plastic, steel, wooden, ping pong, football
Straws - paper, plastic
Pipe - iron, copper, glass
Tubing - plastic, rubber, paper
Nails
Bolts & nuts
Spools - wooden, metal, hard rubber
Rubber tire
Inner tube
Poker chips
Wooden discs
Rubber discs
Bottles - plastic, glass
Containers - tin, plastic, wood, round and square
Wood
Wire
Rope
Water
Clay
Foam rubber
Hard rubber
Styrofoam
Chain
Paint
Soap - bar, flakes, foam
Wooden dowels
Sand
Dirt
Grass
Straw
Leaves
Branches
Pine cones
Seeds
Pods
Paper clips
Nuts